



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/597,235

07/17/2006

Kazuto Fujita

Q96002

8120

23373 7590 06/18/2009  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

06/18/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/597,235	<b>Applicant(s)</b> FUJITA, KAZUTO	
	<b>Examiner</b> Steven D. Maki	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>071706.111008</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

Art Unit: 1791

1) Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 1, "plural" should be --plurality--.

In claim 1 line 5, there is no antecedent basis for "the defined pressure". In claim 1 line 5, it is suggested to change "the defined pressure" to --defined pressure--.

Claim 2 is indefinite because (1) it does not end in a period and (2) the use of the parenthesis makes it unclear if this claim is limited to  $1.1 < A < 2.1$ .

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Art Unit: 1791

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Ohsawa et al

6) **Claims 1, 2 and 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Ohsawa et al (WO 2004/024471).**

WO 2004/024471 (published 03-2004) to Ohsawa et al is available as prior art under 102(a). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. US 2005/0247388, which is not available as prior art, is an English language equivalent.

As to claims 1, 2 and 7, the claimed tire is anticipated by WO 2004/024471 to Ohsawa et al. See FIG 12(a), 12(b), FIG 13(c) and, with respect to the English equivalent US 2005/0247388, paragraphs 150-160.

Japan 901

7) **Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japan 901 (JP 57-147901).**

Japan 901 discloses a pneumatic tire for a car having an asymmetrical tread comprising three circumferential grooves 511, 521, 521. The ground contact area of the inside is 60-90% of the ground contact area of the outside. The **ratio "Sout"/Sin" is therefore 1.1 to 1.7.** Tread radius TR1 is greater than tread radius TR2. Shoulder

Art Unit: 1791

radius SR1 is less than shoulder radius SR2. See Figure 1, Figure 2 and abstract. In the example at the bottom right of page 3, the tread radius TR1 = 440 mm and the tread radius TR2 = 360 mm. A drop off delta of 1-2 mm is defined for the inside. See Figure 2 and bottom left of page 3. As can be seen from Figure 2, the drop off delta of 1-2 mm on the inside causes **the drop off "Hout" to be smaller than the drop off Hout**.

As to claim 1, the claimed tire is anticipated by Japan 901's tire. With respect to Sout being larger than Sin, Japan 901 teaches that the ground contact area of the inside is 60-90% of the ground contact area of the outside, which is the same as "Sout" being 1.1 to 1.7 times Sin. Furthermore, Japan 901's tire satisfies Hout being smaller than Hin since the distance between "the outside tread end" and "a point at which the outer surface of the tread portion intersects the equatorial plane" is smaller than the distance between "the inside tread end" and "a point at which the outer surface of the tread portion intersects the equatorial plane" as evidenced by the distance delta between the outside tread end and the inside tread end.

As to claims 2 and 4-6, note Japan 901's teaching that (1) "Sout" / "Sin" = 1.1 to 1.7, (2) distance delta for the inside is 1-2 mm, (2) ground contact width W is illustrated in Figures 1 and 2 as being about 85% of section width SW and (3) the tire may have a side such as 185 / 70HR13, which means that the section width SW is 185 mm. Also note that the tread is shown in Figure 1 as having a thickness d wherein the distance delta extends through a middle portion of the tread thickness d.

As to claim 3, note Japan 901's disclosure that TR1 > TR2 wherein the radii for the tread may for example be TR1 (outside) = 440 mm and TR2 (inside) = 360 mm. In

Art Unit: 1791

this example, TR1 (outside) is 122% of TR1 (inside). The value of 122% falls within the claimed range of 110-500%.

As to claim 7, note inclined lateral grooves 513, 522.

**8) Claims 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 901 (JP 57-147901) in view of Brayer et al (US 5,000,239) and optionally further in view of Great Britain 588 (GB 2,401,588) or Ohsawa et al (WO 2004/024471).**

Optionally applied Great Britain 588 (published 11-2004) and Ohsawa et al (published 03-2004) are each available as prior art under 35 USC 102(a). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Japan 901, which is discussed above, is considered to anticipate claims 2 and 4-6. In any event: As to claims 2 and 4-6, it would have been obvious to one of ordinary skill in the art to provide Japan 901's pneumatic tire for a car such that

- "Sout" / "Sin" = 1.1 to 2.1 times "Hout" / "Hin" (claim 2),
- "Hout" = 2 to 20 mm (claim 4),
- "Hin" = 3 to 30 mm (claim 5),
- "Hout" = 1.5-15% TW and "Hin" = 2-20% TW (claim 6)

depending on the desired tire size and tread thickness since (1) Japan 901 discloses a pneumatic tire for a car in which (a) "Sout" / "Sin" = 1.1 to 1.7, (b) distance delta for the inside is 1-2 mm, (c) ground contact width W is illustrated in Figures 1 and 2 as being about 85% of section width SW and (d) the tire may have a size such as 185 / 70HR13, which means that the section width SW is 185 mm, (2) Japan 901 shows the tread in

Art Unit: 1791

Figure 1 as having a thickness  $d$  wherein the distance  $\delta$  extends through a middle portion of the tread thickness  $d$  and (3) Brayer et al discloses an example in Table 2 of a pneumatic tire for a passenger car in which (a) the tread thickness is 0.410 in (10.4 mm), (b) the tire size is P205/70HR14 (section width is 205 mm) and (c) the tread arc width is 6.34 in (161 mm) such that the tread width is 79% of the section width (161 mm / 205 mm) and optionally (4) (a) Great Britain teaches providing a pneumatic tire having an asymmetric tread pattern such that (i)  $0.12 \geq \text{groove area ratio } L_i \text{ (inside)} - \text{groove area ratio } L_o \text{ (outside)} \geq 0.05$  and (ii) drop off distance  $H_i \text{ (inside)} / \text{drop off distance } H_o \text{ (outside)} = 1.02 \text{ to } 1.20$  so that the vehicle can turn smoothly, high dry grip resistance is obtained and deterioration of wear resistance is avoided or (b) Ohsawa et al teaches providing a pneumatic tire having an asymmetric tread pattern such that for a tire size such as 205/65 R15 and a groove depth of 8 mm, "S-large" / "S-small" = A times ("H s-small side" / "H (s-large side)") wherein  $A = 1.0\text{-}1.4$  so that steering stability at small steering angle is improved (FIG 12(a), FIG 12(b), FIG 13(c) and, with respect to English equivalent US 2005/0247388, paragraphs 150-160, 187, 190).

With respect to Japan 901 and Brayer et al, the following comments are made: When using a distance  $\delta$  of 2 mm as per Japan 901, a tread thickness of 10.4 mm for Japan 901's tire (as per the tread thickness of Brayer et al's example), and a tread width of 161 mm for Japan 901's tire (as per the tread width of Brayer et al's example), the distance  $H_{out}$  is within the claimed range of 2-20 mm and 1.5-15% TW and the distance  $H_{in}$  is within the claimed range of 3-30 mm and 2-20 % TW. It is noted that 4

Art Unit: 1791

mm tread material can be above and below the region of the tread defined by distance delta.

With respect to the optionally applied Great Britain 588, the following comments are made: Great Britain 588 discloses an example 2 tire in which groove area ratio  $L_i$  (inside) = 0.26 and groove area ratio  $L_o$  (outside) is 0.18. In this example,  $L_i - L_o = 0.08$ . Since "ground contact area ratio" =  $1 - \text{"groove area ratio"}$ , the example 2 tire has ground contact area ratio (inside) = 0.74 and a ground contact area ratio (outside) = 0.82. In the example 2 tire, the ratio "Sout"/"Sin" is therefore  $0.82/0.74 = 1.11$ . Since  $H_i/H_o = 1.02$  to  $1.20$ ,  $H_i/H_o$  can equal  $1.02$ , which is equivalent to  $H_o/H_i = 1/1.02$ , the expression  $S_o/S_i = A \text{ times } H_o/H_i$  can be  $1.11 = A \text{ times } (1/1.02)$ , which means that  $A = 1.13$  (within the claimed range of  $1.1$  to  $2$ ). Also, Great Britain 588 teaches that  $L_i - L_o$  may be  $0.12$  (higher than the difference of  $0.08$  for  $L_i - L_o$  for example 2). If the  $L_i - L_o$  difference in Example 2 is increased by  $0.04$  by using  $L_o = 0.14$  (instead of  $0.18$ ), then the ratio "Sout"/"Sin" can equal  $0.86/0.74 = 1.16$ . With "Sout"/"Sin" =  $1.16$  and  $H_o/H_i = 1/1.02$ , then  $A = 1.18$  (within the claimed range for  $A$  of  $1.1$  to  $2$ ). It is acknowledged that Great Britain 588 teaches using only one circumferential groove. However, Japan 901 teaches using plural circumferential grooves and Great Britain 588's disclosure as to  $H_i/H_o$  provides guidance to one of ordinary skill in the art what the illustrated distances  $H_i$  and  $H_o$  in Japan 901 should be.

With respect to the optional Ohsawa et al, this reference substantially discloses the subject matter set forth in claim 2.



Remarks

- 9) The remaining references are of interest.
- 10) No claim is allowed.
- 11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/  
Primary Examiner, Art Unit 1791

Steven D. Maki  
June 17, 2009